

## IN THE SPECIFICATION

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On page 5, of the specification, please replace lines 21-34 with the following:

--Referring to Figure 1 the superconducting magnet system comprises an annular cryogenic vessel 1 (shown in axial section so that only two opposite parts angularly offset by 120 degrees relative to one another can be seen in the figure) having an outer vacuum container 4 and containing a superconducting magnet 11 comprising magnet coils (not shown in detail). The magnet 11 is housed within an inner chamber inside a stainless steel annular reservoir 16 for containing liquid helium boiling at reduced pressure at about 2.2K, the magnet 11 and the reservoir 16 being suspended from the top wall of an outer vacuum container 4 by means of high tensile GRP rods (not shown). An outer chamber for containing liquid helium boiling at normal atmospheric pressure at about 4.2K is defined within a secondary stainless steel annular reservoir 7 surrounding the reservoir 16. Furthermore a gas-cooled solid shield 6 made of high conductivity aluminium surrounds the secondary reservoir 7 and is cooled mainly by cold evaporating helium gas from the reservoirs 16 and 7. Finally the gas-cooled shield 6 is surrounded by a liquid nitrogen reservoir 5 for containing liquid nitrogen (LN<sub>2</sub>) at normal atmospheric pressure at about 77K and a further gas-cooled radiation shield 14.--

On page 6 of the specification, please replace lines 19-29 with the following:

--On initial start-up of the system the reservoirs 16 and 7 contain liquid helium boiling at 4.2 K at atmospheric pressure. However, in order to enhance the properties of the superconducting wire from which the magnet coils are wound, the temperature of the liquid helium in the inner chamber within the reservoir 16 is reduced to about 2.2 K by reducing the pressure above it by means of a rotary pump (not shown) connected to an exhaust outlet 2 connected to the neck 17. As well as acting as a cold radiation shield, the secondary reservoir 7 is used to replenish the reservoir 16 with liquid helium. At a predetermined low level of the helium within the reservoir 16 as indicated by the level monitor 15, a needle valve 9 within a feed tube 10 interconnecting the reservoirs 16 and 7 may be opened by the

actuating shaft 8 so as to permit helium to flow from the secondary reservoir 7 to the reservoir 16 by virtue of the higher pressure in the reservoir 7.--

On page 9 of the specification, please replace lines 3-13 with the following:

--In order to stress the difference between such an arrangement and a known lambda-point refrigerator, reference will now be made to Figure 2 which is an axial section through such a known lambda-point refrigerator. In this case the magnet 20 is accommodated within a helium reservoir 21 which is itself surrounded by a LN<sub>2</sub> shield 25 and gas-cooled radiation shields 24. The liquid helium is drawn into a refrigerating element 21 by a rotary pump connected to the exhaust outlet 26 by a tube 3, a needle valve 22 being provided to throttle the liquid flow to allow low pressure in the refrigerating element 21 and hence a lower temperature for the boiling helium. The surrounding liquid in the reservoir 20 is cooled by conduction and falls to the bottom of the reservoir 20 due to its higher density. A thermal barrier 29 is provided to help prevent conduction of helium in the upper part of the reservoir 20 at 4.2 K to the lower part of the reservoir 20 at lower temperature.--